

OC2800 1900 TO 2800 MHz VOLTAGE CONTROLLED OSCILLATOR

Typical Values @ +25 °C	OC2800
Tuning Voltage Limits	1.5 - 13.5 V
Power Output	+10.0 dBm
Power Output Variation	1.5 dB
Standard Size TO-8 Package	

SPECIFICATIONS*

Parameter	Typical	Guaranteed	
		0 to 50 °C	-55 to +85 °C
Frequency	1900-2800 MHz	1900-2800 MHz	1900-2800 MHz
Tuning Voltage Limits			
Tuning Voltage at low end	1.5 V	1.0 V	0 V
Tuning voltage at high end	13.5 V	14.5 V	15 V
Power Output (Min.)	+10.0 dBm	+9.0 dBm	+8.0 dBm
Power Flatness[^] (Max.)	1.5 dB	1.9 dB	2.2 dB
Modulation Sensitivity (Min.-Max.)	50 to 120 MHz/V	45 to 150 MHz/V	40 to 155 MHz/V
Modulation Sensitivity Ratio (Max.)	2.4:1	2.6:1	2.8:1
SSB Phase Noise (Max.)			
at 10 kHz offset	-73 dBc/Hz	-72 dBc/Hz	-71 dBc/Hz
at 100 kHz offset	-101 dBc/Hz	-99 dBc/Hz	-98 dBc/Hz
Frequency Drift (Max.)	—	45 MHz	80 MHz
Harmonics (Max.)	-12.0 dBc	-10.0 dBc	-10.0 dBc
Spurious (Max.)	-62.0 dBc	-60.0 dBc	-60.0 dBc
Frequency Pulling (Max.)			
Load VSWR = 1.67:1	32.0 MHz	35.0 MHz	40.0 MHz
Frequency Pushing (Max.)			
V _{dc} ± 0.5 V	15.0 MHz/V	22.0 MHz/V	25.0 MHz/V
Bias Voltage (V_{dc})	15.0 V	15.0 V	15.0 V
DC Current (Max.)	58 mA	59 mA	60 mA

* Specifications are measured in 50-ohm system at +15 Volts bias unless otherwise specified.
[^] Power Flatness is defined as power variation over frequency band at any given temperature.

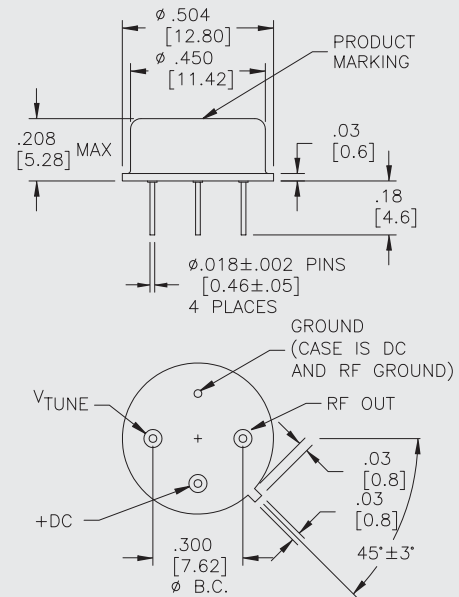
ABSOLUTE MAXIMUM RATINGS

Storage Temperature	-62 °C to +125 °C
Maximum Case Temperature	125 °C
Maximum DC Voltage	+17 V
Maximum Tuning Voltage	+20 V
Burn-In Temperature	+125 °C
Thermal Resistance¹ (θ_{jc})	+40.1 °C/Watt
Junction Temperature Rise Above Case (T_{jc})	+34.3 °C

¹ Thermal resistance is based on total power dissipation. Ratings based on +25 °C.

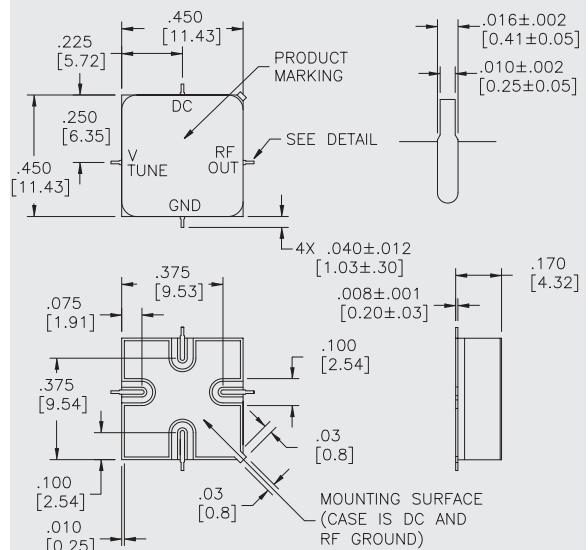
OC2800

TO-8 Package for Oscillators



OS2800

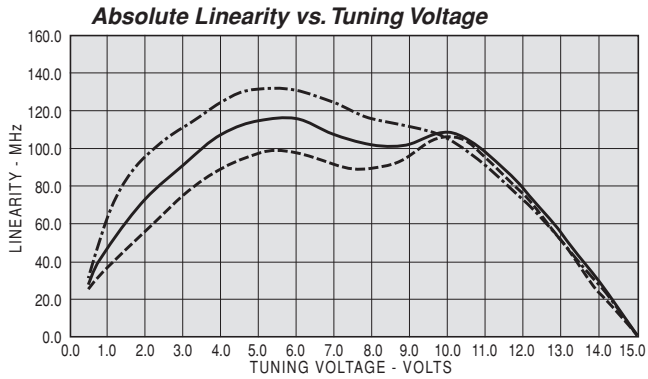
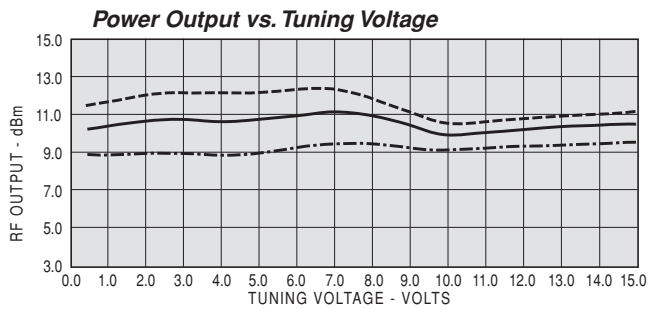
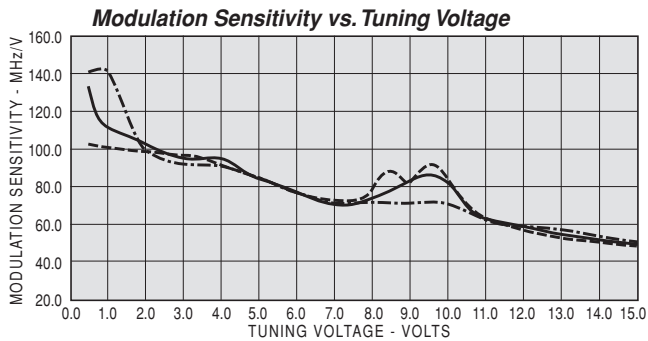
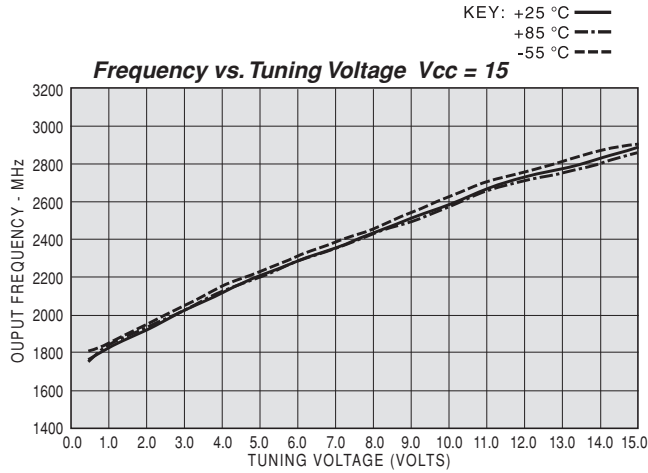
SMT0-8 for Oscillators



DIMENSIONS ARE IN INCHES [MILLIMETERS]

TYPICAL PERFORMANCE

TYPICAL AUTOMATIC TEST DATA



Model: OC2800 Vcc= +15V Vstr mA = 60.073 Vstop mA = 58.680

TUNING VOLTAGE V	FREQ. MHz	POWER dBm	MODULATION SENSITIVITY MHz/V	LINEARITY MHz
0.0	1705.83	10.34	0.00	0.00
1.0	1828.99	10.47	114.18	43.37
1.5	1884.04	10.57	111.33	58.97
2.0	1936.99	10.69	104.57	71.52
2.5	1986.53	10.77	100.32	81.67
3.0	2035.14	10.78	96.07	89.91
3.5	2083.29	10.72	97.48	98.65
4.0	2131.65	10.70	95.46	106.60
4.5	2174.76	10.77	87.39	110.35
5.0	2217.23	10.83	83.70	112.34
5.5	2257.43	10.90	81.45	113.17
6.0	2297.10	11.00	78.36	112.45
6.5	2332.62	11.14	71.95	108.58
7.0	2368.82	11.16	71.47	104.38
7.5	2406.19	11.03	75.70	102.36
8.0	2446.27	10.81	79.05	101.99
8.5	2487.55	10.51	83.68	103.92
9.0	2535.34	10.14	94.36	111.30
9.5	2578.18	9.96	86.73	114.73
10.0	2616.24	9.95	75.18	112.40
10.5	2648.75	10.04	65.81	105.50
11.0	2678.74	10.14	60.70	96.07
11.5	2710.21	10.18	62.13	87.14
12.0	2739.58	10.25	59.52	77.14
12.5	2768.52	10.32	57.14	65.67
13.0	2796.06	10.37	55.74	53.80
13.5	2823.73	10.41	54.69	41.10
14.0	2850.14	10.43	53.47	28.10
14.5	2876.69	10.46	52.41	14.24
15.0	2901.86	10.48	50.96	0.00

